

## AMENDMENTS TO THE CLAIMS

**1. (Currently amended)** A polymethylaluminoxane composition generated by thermal decomposition of an alkylaluminum compound having an aluminum-oxygen-carbon bond, the alkylaluminum compound being generated by a reaction between trimethylaluminum and toluic benzoic acid, with toluene as a solvent, wherein:

(i) a mole fraction of methyl groups originating from trimethylaluminum, relative to the total moles of methyl groups existing in the generated polymethylaluminoxane composition, is not more than 26 mol%; and

(ii) the generated polymethylaluminoxane composition has a viscosity of not more than  $2.1 \times 10^{-3}$  Pa•sec at 40°C

-and

(iii) an aluminum concentration of the generated polymethylaluminoxane composition is in a range of from 9.1 wt% to 9.4 wt%.

### **2-3. (Cancelled)**

**4. (Withdrawn- Currently amended)** A method of producing a polymethylaluminoxane composition having a mole fraction of methyl groups originating from trimethylaluminum, relative to the total moles of methyl groups of not more than 26 mol% and a viscosity of not more than  $2.1 \times 10^{-3}$  Pa•sec at 40°C, the method comprising the steps of:

causing trimethylaluminum to react with toluic benzoic acid, with toluene as a solvent,  
and

thermally decomposing the alkylaluminum compound,

wherein a ratio between a mole number of trimethylaluminum and a mole number of oxygen in the oxygen-containing compound represented by the general formula (I) is in the range of 1.25 to 1.40 : 1.

**5. (Withdrawn)** The method of producing a polymethylaluminoxane composition according to claim 4, wherein

the thermal decomposition is conducted in the absence of a Lewis acid compound in production of the polymethylaluminoxane composition.

**6-7. (Cancelled)**

**8. (Withdrawn)** A polymerization catalyst for olefins, comprising as catalytic components:

a transition metal compound represented by the general formula (II),

$MR^5R^6R^7R^8$  (II)

wherein M represents a transition metal element, and R<sup>5</sup>, R<sup>6</sup>, R<sup>7</sup>, and R<sup>8</sup> represent organic groups that form together a cycloalkadienyl backbone, such as an alkyl group, an alkoxy group, an aryloxy group, an alkylsilyl group, an alkylamide group, an alkylimide group, an alkylamino group, an alkylimino group, or a halogen atom; and

the polymethylaluminoxane composition according to claim 1.

**9. (Withdrawn)** A method of polymerizing olefins using the polymerization catalyst according to claim 8.

**10-15. (Cancelled)**